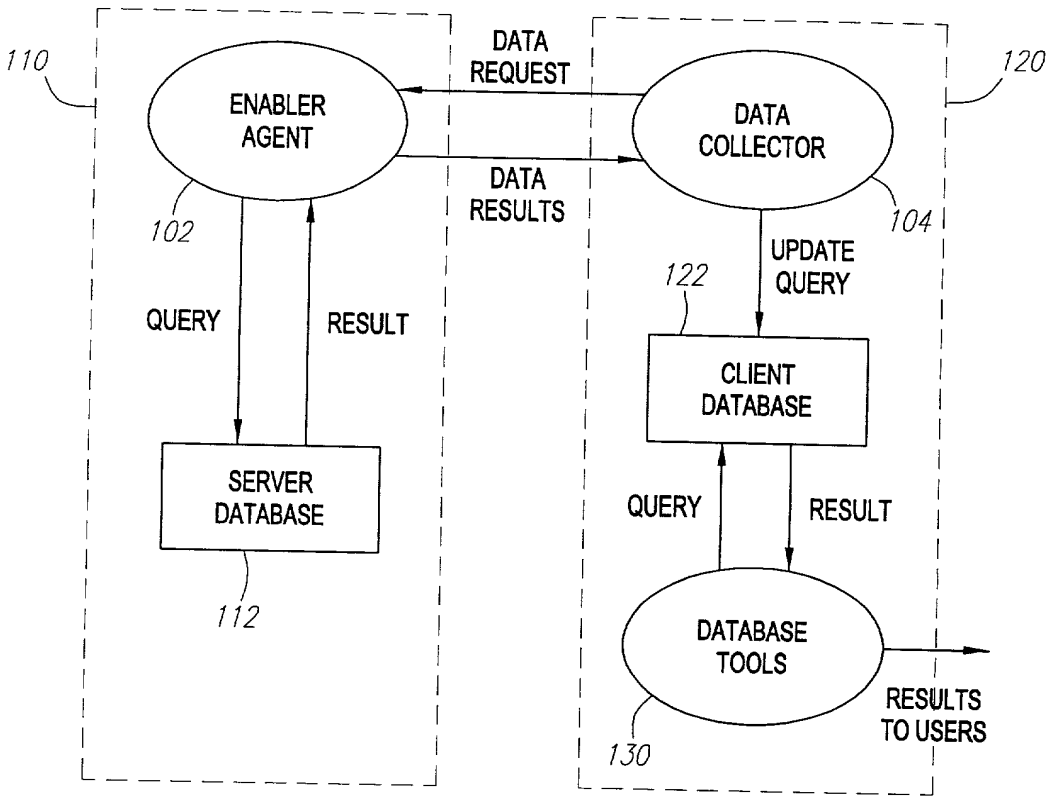
110
ENABLER AGENT
102
DATA REQUEST
DATA RESULTS
QUERY
RESULT
SERVER DATABASE
112
120
DATA COLLECTOR
104
UPDATE QUERY
122
CLIENT DATABASE
QUERY
RESULT
DATABASE TOOLS
130
RESULTS TO USERS

*FIG. 1*

| 210 | PRODUCTS | | | |
|---|---|---|---|---|
| | KEY | MODEL # | DESCRIPTION | PRICE |
| 211 | 1 | 10 - A | BICYCLE | $399 |
| | 2 | 12 - L | TRICYCLE | $159 |
| | 3 | 16 - Q | UNICYCLE | $209 |
| | 4 | 18 - F | TANDEM | $579 |
| | 212 | 214 | 216 | 218 |

*FIG. 2A*

| 220 | PARTS | | | | |
|---|---|---|---|---|---|
| | KEY | FKEY | PART # | DESC. | PRICE |
| 221 | 1 | 1 | 12 | BICYCLE FRAME | $65 |
| | 2 | 1 | 16 | BICYCLE WHEEL | $20 |
| | 3 | 1 | 19 | FRONT BRAKE | $18 |
| | 4 | 2 | 4 | FRONT WHEEL | $32 |
| | 5 | 2 | 13 | SEAT | $50 |
| | 6 | 3 | 36 | POST SEAT | $8 |
| | 7 | 3 | 17 | TIRE | $20 |
| | 8 | 4 | 42 | SEAT | $50 |
| | 222 | 224 | 226 | 228 | 229 |

*FIG. 2B*

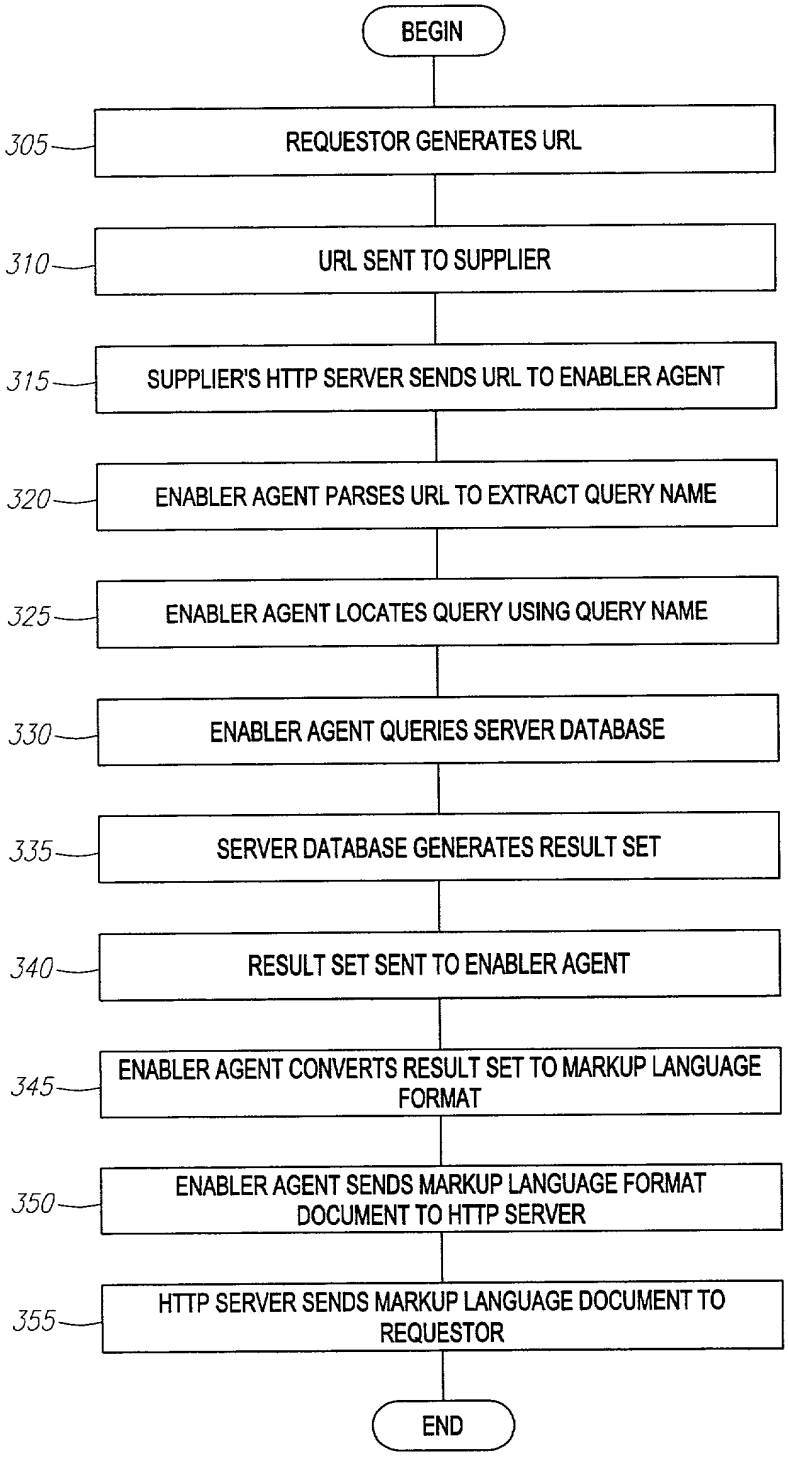
BEGIN
305
REQUESTOR GENERATES URL
310
URL SENT TO SUPPLIER
315
SUPPLIER'S HTTP SERVER SENDS URL TO ENABLER AGENT
320
ENABLER AGENT PARSES URL TO EXTRACT QUERY NAME
325
ENABLER AGENT LOCATES QUERY USING QUERY NAME
330
ENABLER AGENT QUERIES SERVER DATABASE
335
SERVER DATABASE GENERATES RESULT SET
340
RESULT SET SENT TO ENABLER AGENT
345
ENABLER AGENT CONVERTS RESULT SET TO MARKUP LANGUAGE FORMAT
350
ENABLER AGENT SENDS MARKUP LANGUAGE FORMAT DOCUMENT TO HTTP SERVER
355
HTTP SERVER SENDS MARKUP LANGUAGE DOCUMENT TO REQUESTOR
END

*FIG. 3*

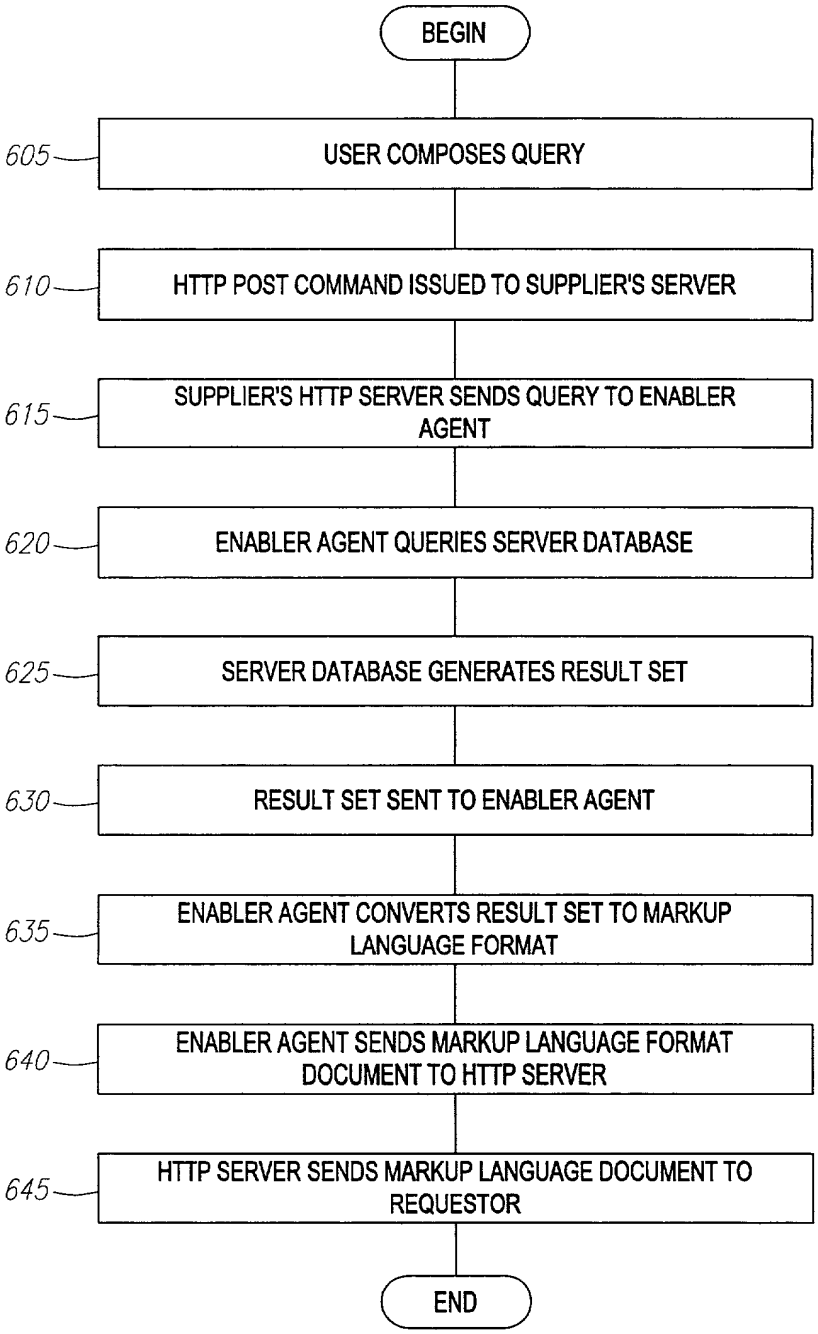
BEGIN
605
USER COMPOSES QUERY
610
HTTP POST COMMAND ISSUED TO SUPPLIER'S SERVER
615
SUPPLIER'S HTTP SERVER SENDS QUERY TO ENABLER AGENT
620
ENABLER AGENT QUERIES SERVER DATABASE
625
SERVER DATABASE GENERATES RESULT SET
630
RESULT SET SENT TO ENABLER AGENT
635
ENABLER AGENT CONVERTS RESULT SET TO MARKUP LANGUAGE FORMAT
640
ENABLER AGENT SENDS MARKUP LANGUAGE FORMAT DOCUMENT TO HTTP SERVER
645
HTTP SERVER SENDS MARKUP LANGUAGE DOCUMENT TO REQUESTOR
END

*FIG. 4*

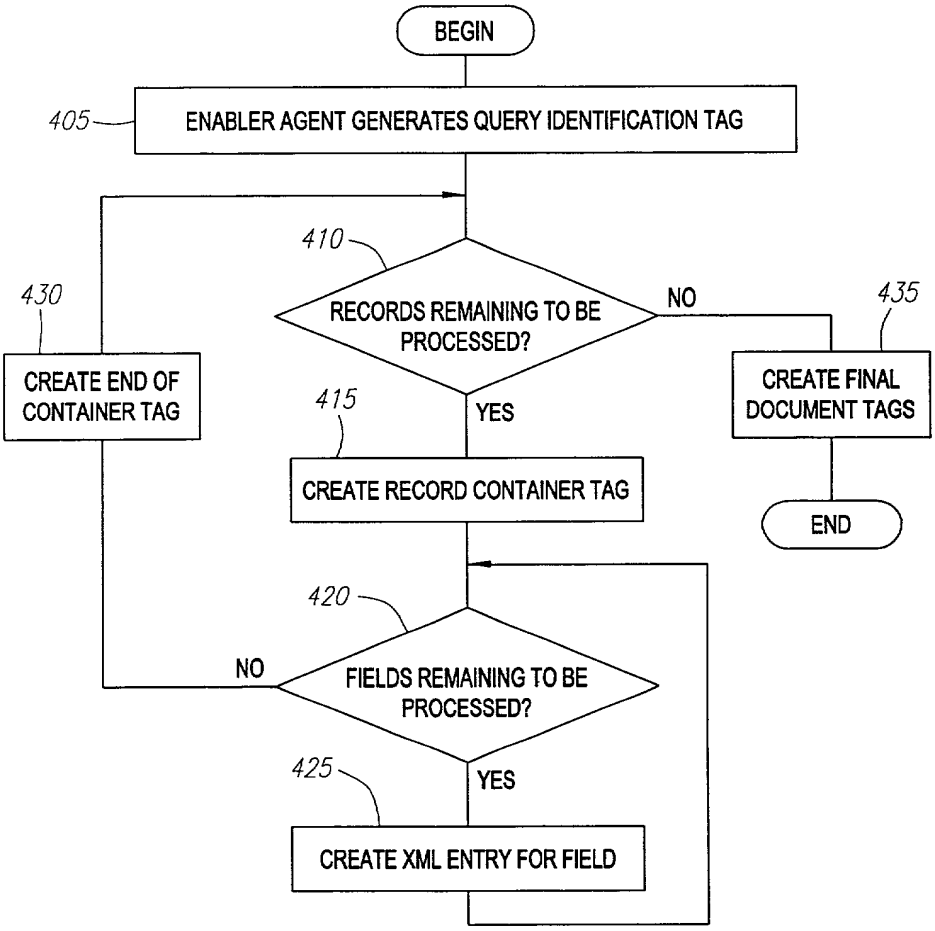
BEGIN
405
ENABLER AGENT GENERATES QUERY IDENTIFICATION TAG
410
RECORDS REMAINING TO BE PROCESSED?
NO
435
CREATE FINAL DOCUMENT TAGS
END
YES
415
CREATE RECORD CONTAINER TAG
420
FIELDS REMAINING TO BE PROCESSED?
NO
430
CREATE END OF CONTAINER TAG
YES
425
CREATE XML ENTRY FOR FIELD

*FIG. 5*

```
<!? XML>
502 —— <QUERY URL = "HTTP://"WWW.BIKECO.COM/MLE-CGI/XML?BICYCLEPARTS"/>
504 —— <RECORD NUMBER = 1>
    506 —— <KEY>1</KEY>
           <FKEY>1</FKEY>
           <PART#>12</PART#>
           <DESC>BICYCLE FRAME</DESC>
           <PRICE>65</PRICE>
    508 —— </RECORD>
    <RECORD NUMBER = 2>
           <KEY>2</KEY>
           <FKEY>1</FKEY>
           <PART#>16</PART#>
           <DESC>BICYCLE WHEEL</DESC>
           <PRICE>20</PRICE>
           </RECORD>
    <RECORD NUMBER = 3>
           <KEY>3</KEY>
           <FKEY>1</FKEY>
           <PART#>19</PART#>
           <DESC>FRONT BRAKE</DESC>
           <PRICE>18</PRICE>
510 —— </XML>
```

*FIG. 6*

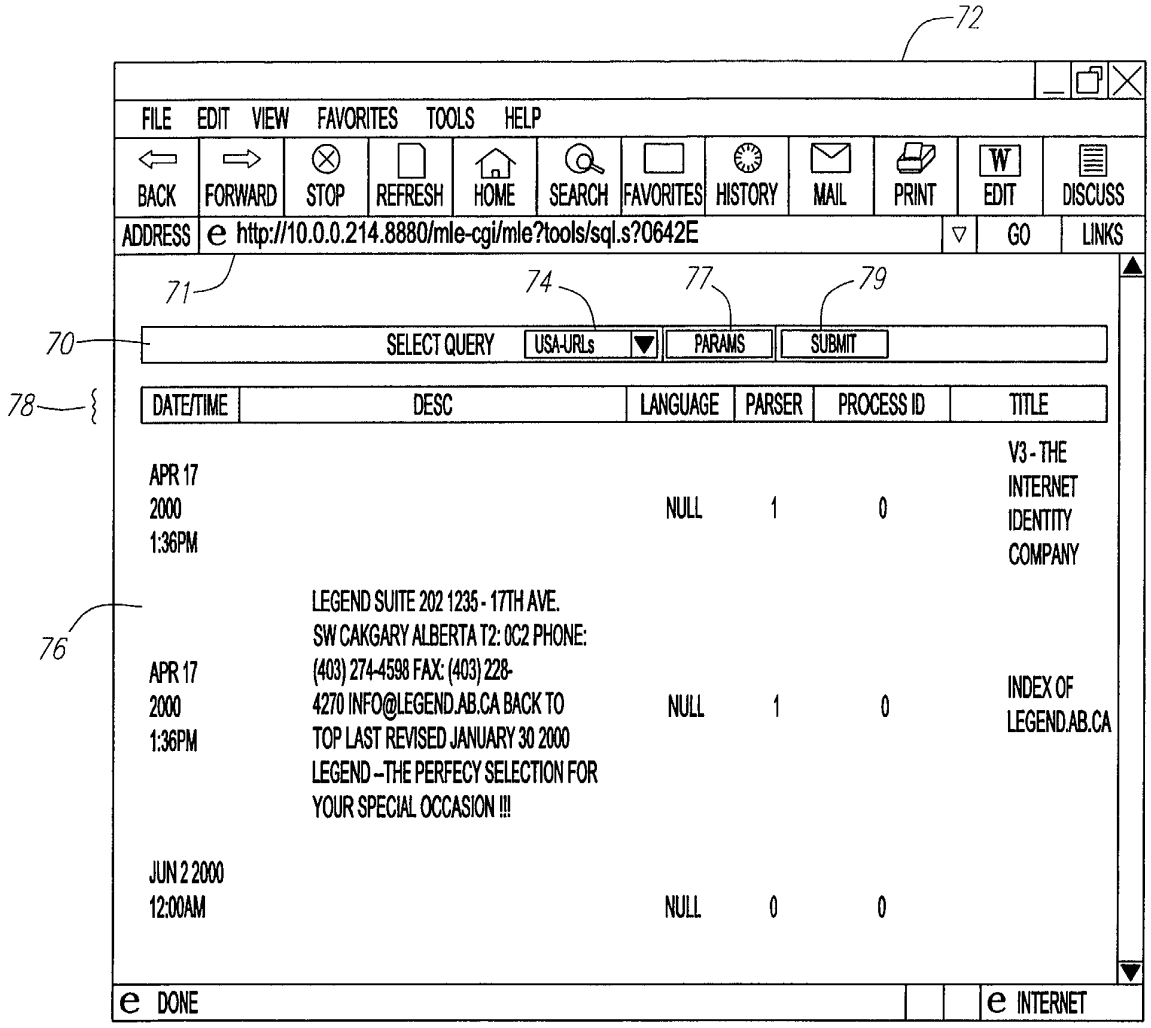
72
FILE EDIT VIEW FAVORITES TOOLS HELP
BACK FORWARD STOP REFRESH HOME SEARCH FAVORITES HISTORY MAIL PRINT EDIT DISCUSS
ADDRESS http://10.0.0.214.8880/mle-cgi/mle?tools/sql.s?0642E
GO LINKS
71
74
77
79
70
SELECT QUERY
USA-URLs
PARAMS
SUBMIT
78
DATE/TIME
DESC
LANGUAGE
PARSER
PROCESS ID
TITLE
APR 17 2000 1:36PM
NULL 1 0
V3 - THE INTERNET IDENTITY COMPANY
76
APR 17 2000 1:36PM
LEGEND SUITE 202 1235 - 17TH AVE. SW CAKGARY ALBERTA T2: 0C2 PHONE: (403) 274-4598 FAX: (403) 228-4270 INFO@LEGEND.AB.CA BACK TO TOP LAST REVISED JANUARY 30 2000 LEGEND --THE PERFECY SELECTION FOR YOUR SPECIAL OCCASION !!!
NULL 1 0
INDEX OF LEGEND.AB.CA
JUN 2 2000 12:00AM
NULL 0 0
DONE
INTERNET

*FIG. 7*

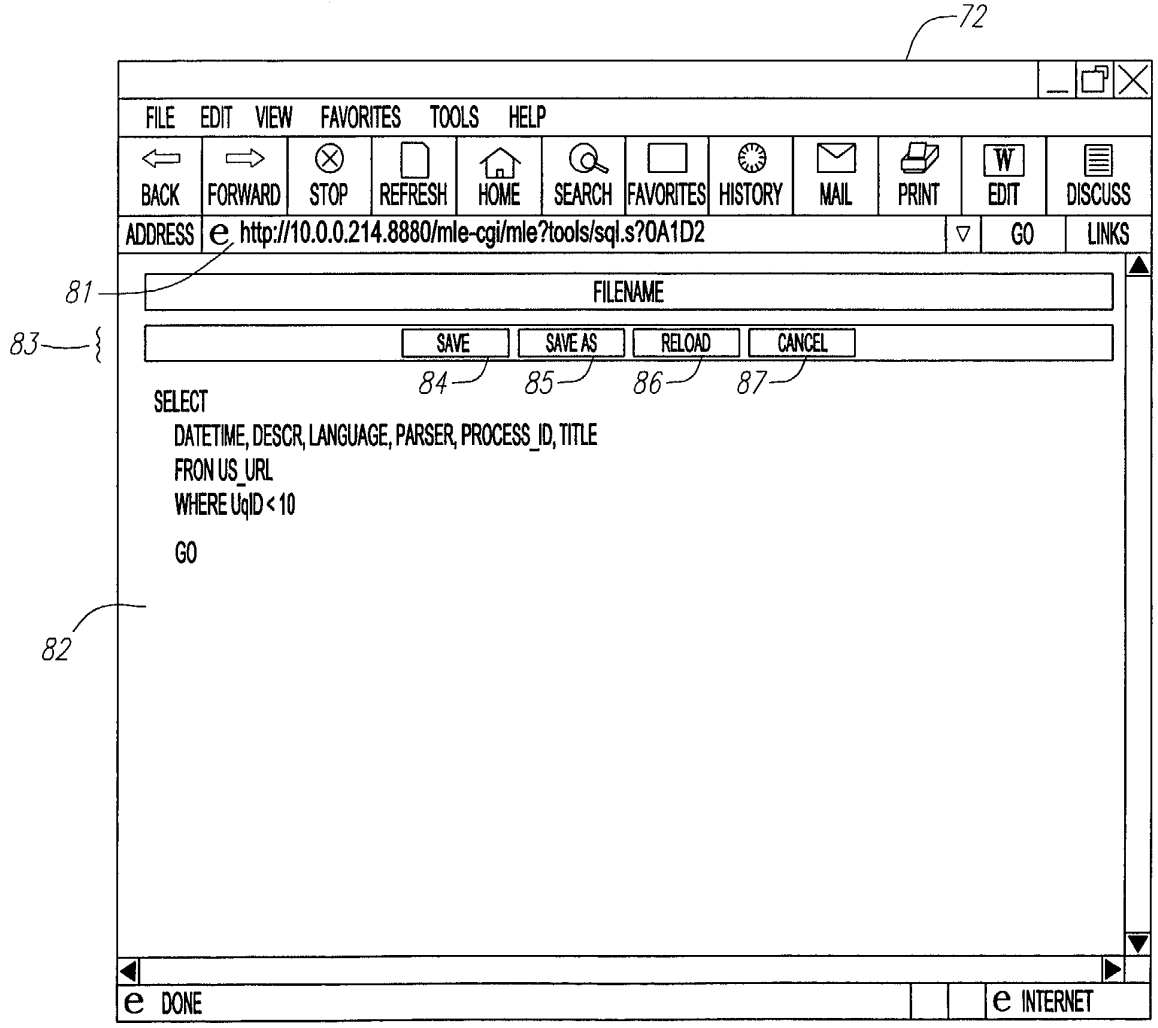
72
FILE EDIT VIEW FAVORITES TOOLS HELP
BACK FORWARD STOP REFRESH HOME SEARCH FAVORITES HISTORY MAIL PRINT EDIT DISCUSS
ADDRESS http://10.0.0.214.8880/mle-cgi/mle?tools/sql.s?0A1D2
GO LINKS
81
FILENAME
83
SAVE SAVE AS RELOAD CANCEL
84 85 86 87
SELECT
DATETIME, DESCR, LANGUAGE, PARSER, PROCESS_ID, TITLE
FRON US_URL
WHERE UqID < 10
GO
82
DONE
INTERNET

*FIG. 8*

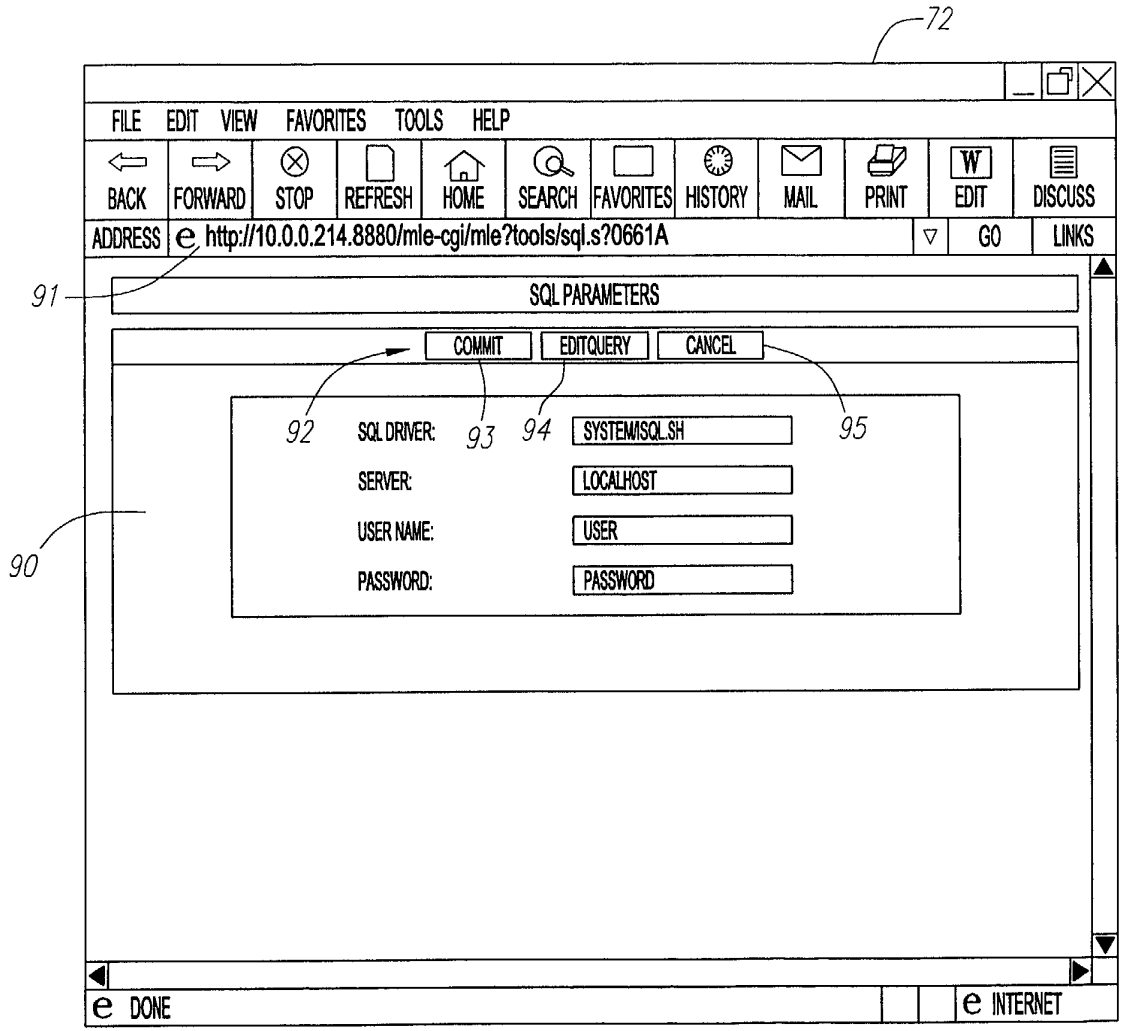
72
FILE EDIT VIEW FAVORITES TOOLS HELP
BACK FORWARD STOP REFRESH HOME SEARCH FAVORITES HISTORY MAIL PRINT EDIT DISCUSS
ADDRESS http://10.0.0.214.8880/mle-cgi/mle?tools/sql.s?0661A
GO LINKS
91
SQL PARAMETERS
COMMIT EDITQUERY CANCEL
92 93 94 95
SQL DRIVER: SYSTEM/SQL.SH
SERVER: LOCALHOST
USER NAME: USER
PASSWORD: PASSWORD
90
DONE
INTERNET

*FIG. 9*

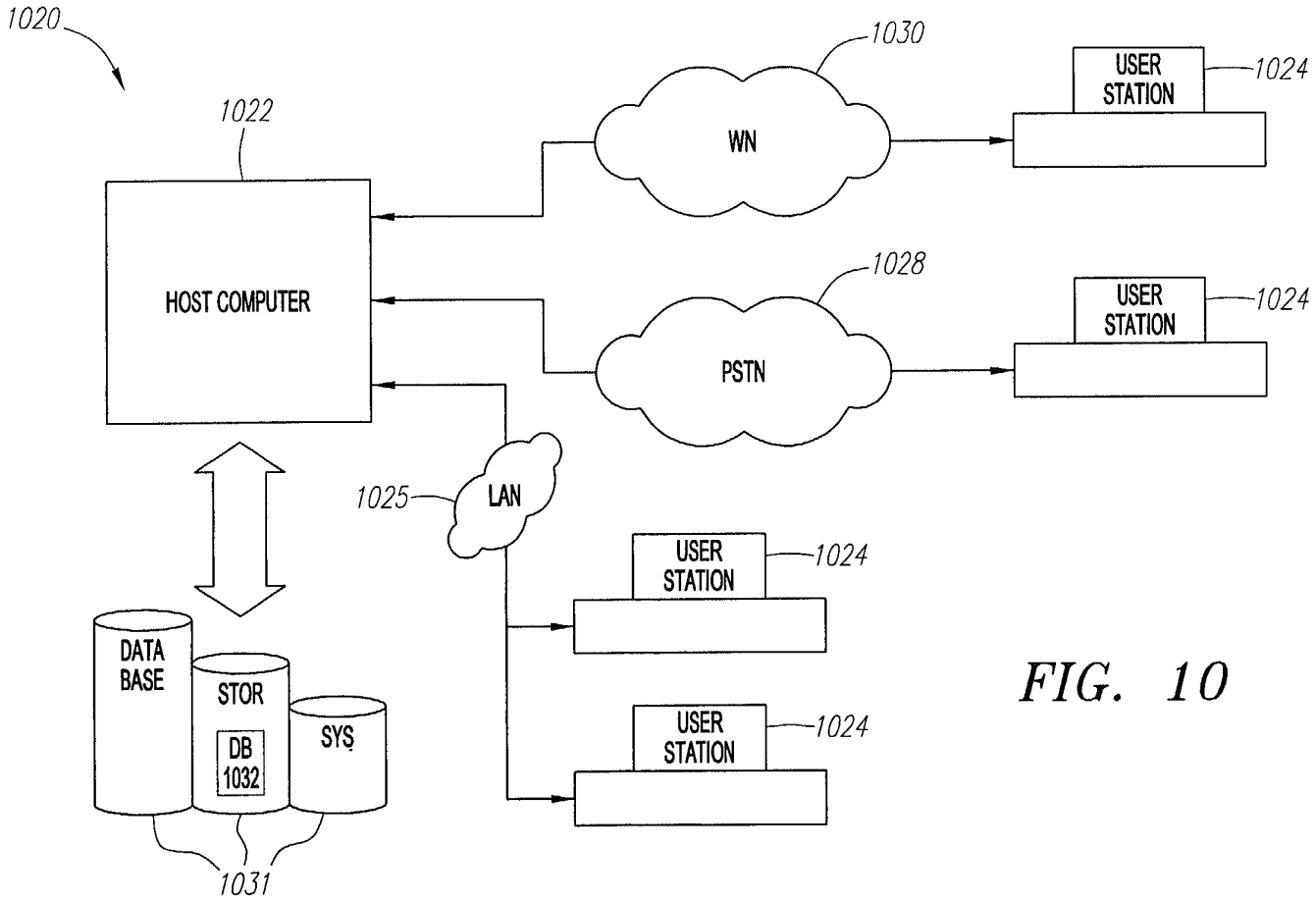
1020
1022
HOST COMPUTER
1030
WN
1028
PSTN
1025
LAN
USER STATION
1024
USER STATION
1024
USER STATION
1024
DATA BASE
STOR
DB 1032
SYS
1031

FIG. 10

Document Classified

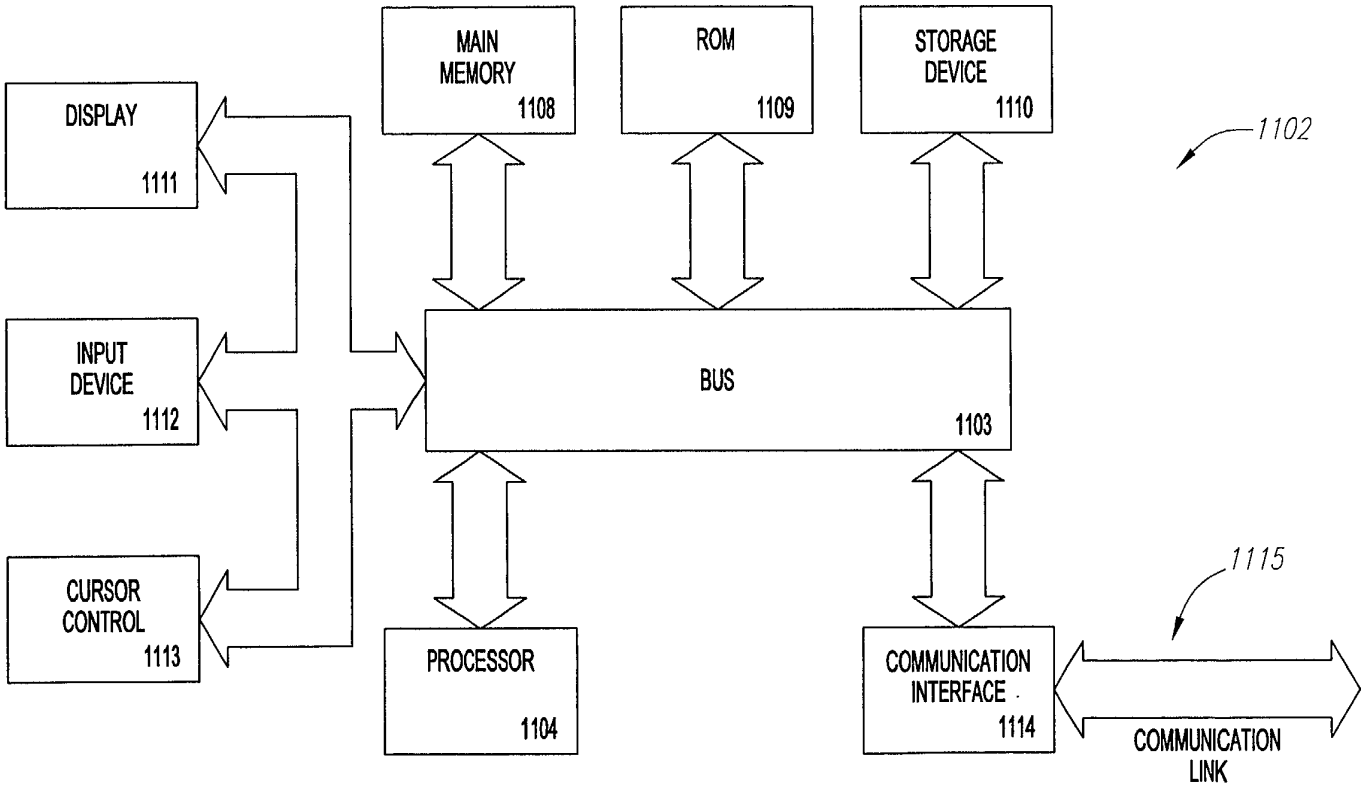


*FIG. 11*

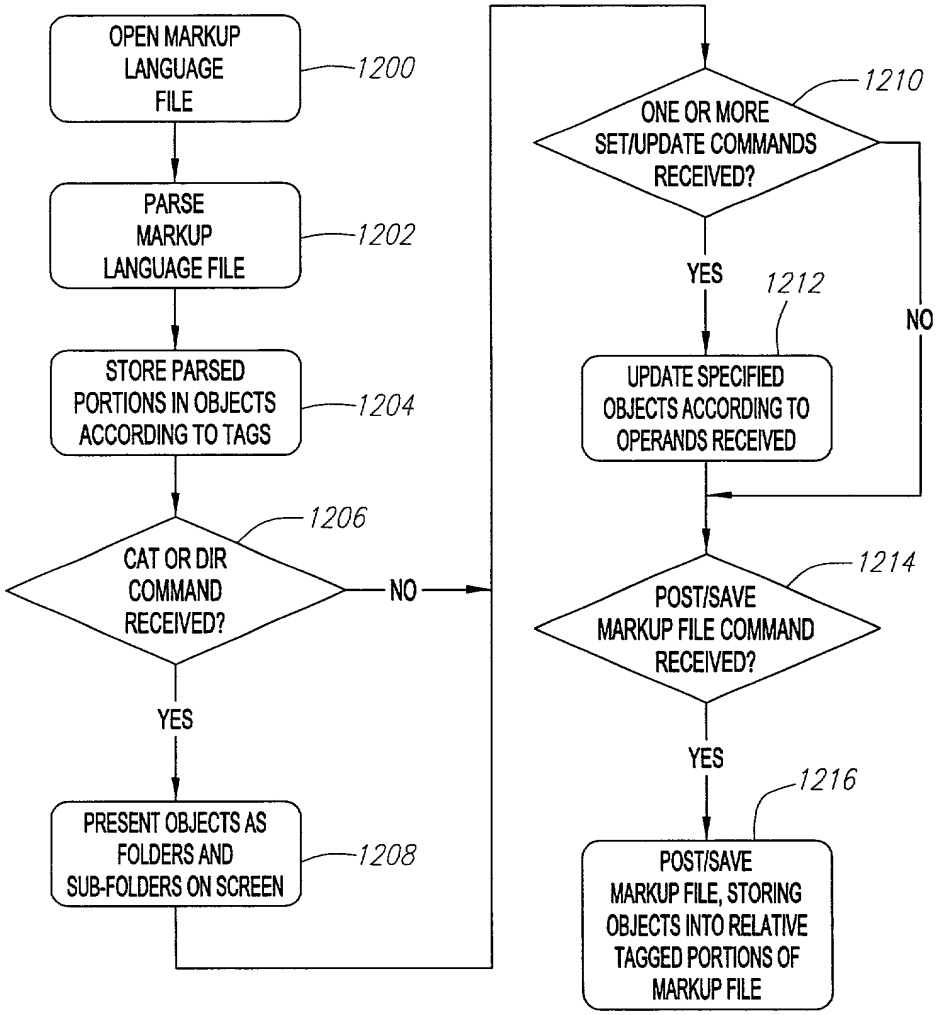
OPEN MARKUP LANGUAGE FILE
1200
PARSE MARKUP LANGUAGE FILE
1202
STORE PARSED PORTIONS IN OBJECTS ACCORDING TO TAGS
1204
CAT OR DIR COMMAND RECEIVED?
1206
NO
YES
PRESENT OBJECTS AS FOLDERS AND SUB-FOLDERS ON SCREEN
1208
ONE OR MORE SET/UPDATE COMMANDS RECEIVED?
1210
YES
1212
NO
UPDATE SPECIFIED OBJECTS ACCORDING TO OPERANDS RECEIVED
POST/SAVE MARKUP FILE COMMAND RECEIVED?
1214
YES
1216
POST/SAVE MARKUP FILE, STORING OBJECTS INTO RELATIVE TAGGED PORTIONS OF MARKUP FILE

*FIG. 12*

1400

| INVENTORY ORDERING | | | | | |
|---|---|---|---|---|---|
| SUPPLIER ID | SUPPLIER RECORD # | KEY | SUPPLIER PARTY NUMBER | DESCRIPTION | WHOLESALE PRICE |
| CARCO | 17 | 1 | M-17-Z | 15" WHEEL | $17.50 |
| CARCO | 36 | 2 | M-28-Z | 17" WHEEL | $19.50 |
| TRUCKCO | 4 | 3 | QRL5 | 26" DUAL WHEEL | $39.45 |
| CARCO | 83 | 4 | N-14-F | 15" HUBCAP | $7.75 |
| BIKECO | 2 | 5 | 16 | BYCYCLE WHEEL | $20.00 |
| TRUCKCO | 2 | 5 | ENF8 | 33" SPARE TIRE | $53.05 |
| BIKECO | 4 | 7 | 4 | FRONT WHEEL | $32.00 |
| CARCO | 94 | 8 | L-19-F | LIMITED-SERVICE SPARE TIRE | $8.50 |

1410 1420 1430 1440 1450 1460

*FIG. 13*

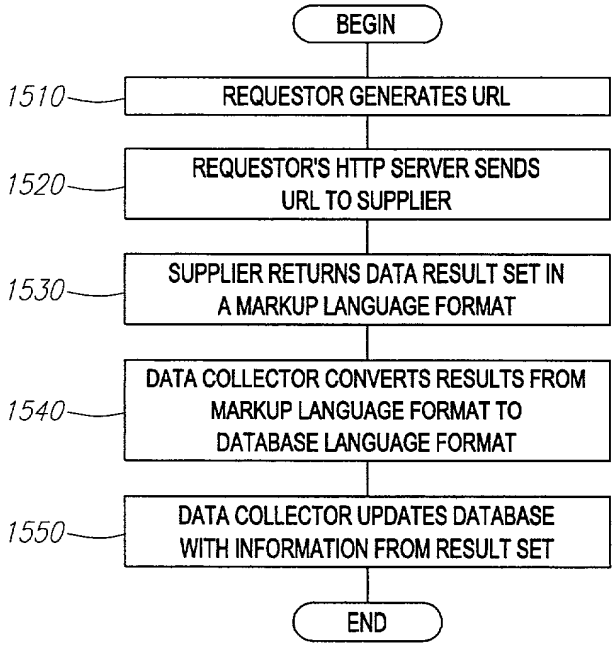


*FIG. 14*

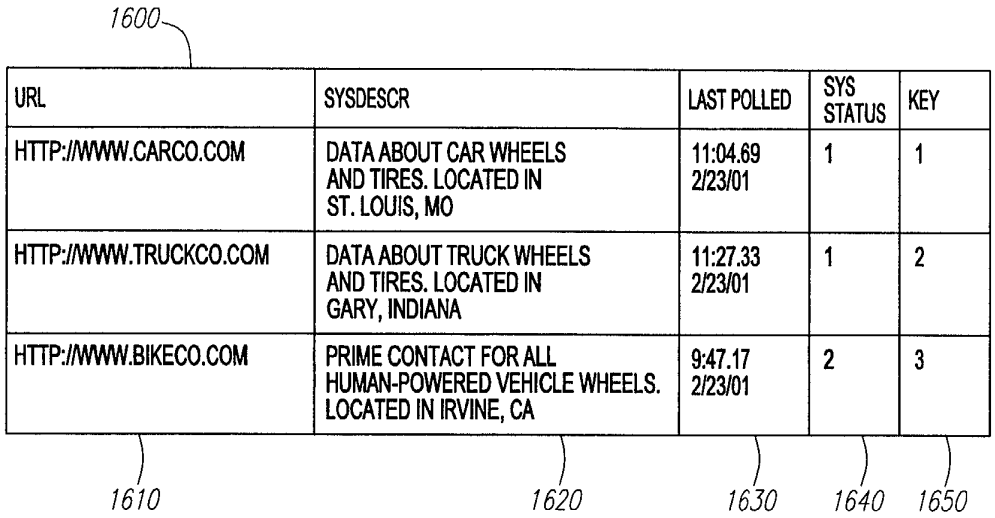
1600
URL
SYSDESCR
LAST POLLED
SYS STATUS
KEY
HTTP://WWW.CARCO.COM
DATA ABOUT CAR WHEELS AND TIRES. LOCATED IN ST. LOUIS, MO
11:04.69 2/23/01
1
1
HTTP://WWW.TRUCKCO.COM
DATA ABOUT TRUCK WHEELS AND TIRES. LOCATED IN GARY, INDIANA
11:27.33 2/23/01
1
2
HTTP://WWW.BIKECO.COM
PRIME CONTACT FOR ALL HUMAN-POWERED VEHICLE WHEELS. LOCATED IN IRVINE, CA
9:47.17 2/23/01
2
3
1610
1620
1630
1640
1650

*FIG. 15*

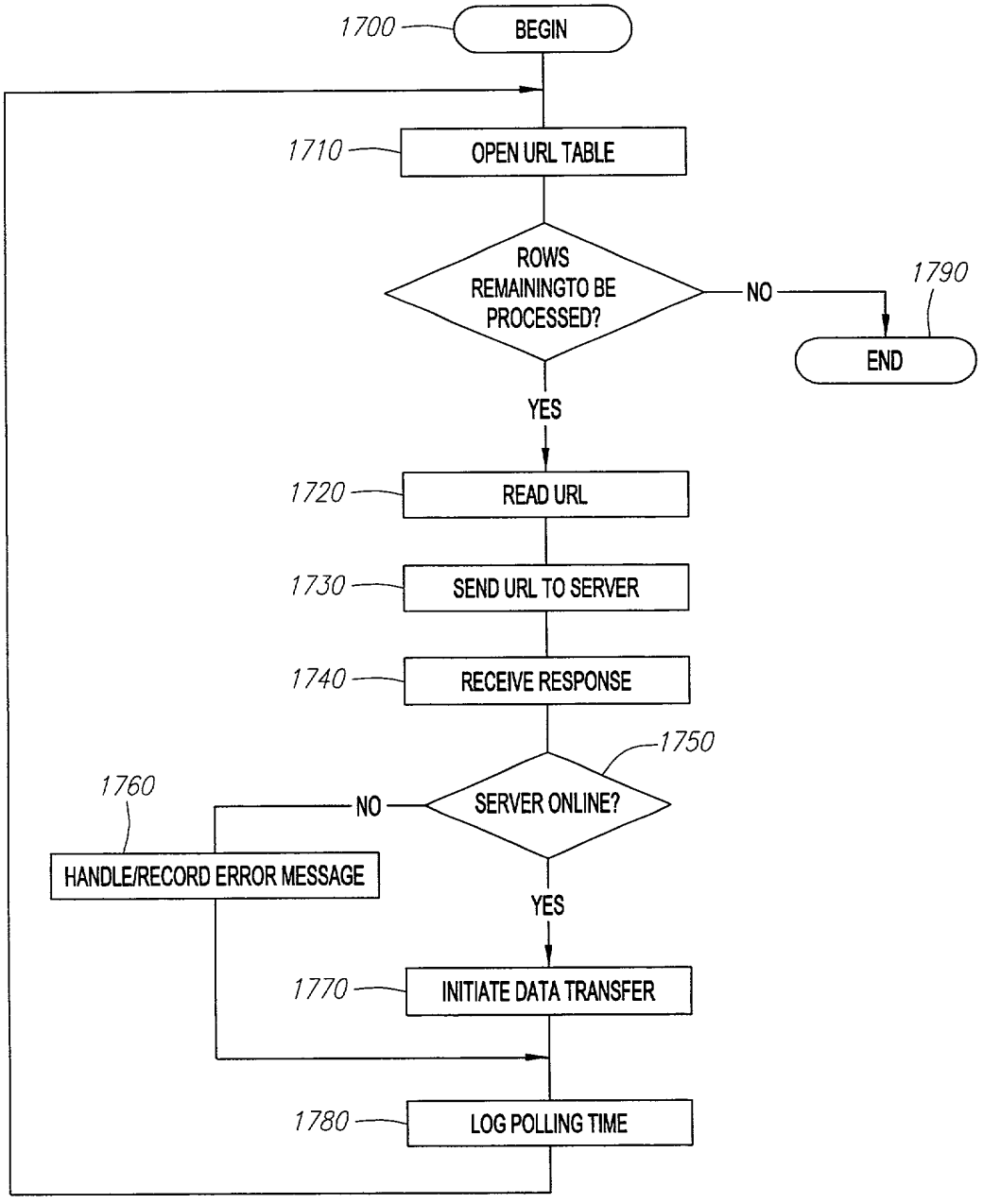
1700
BEGIN
1710
OPEN URL TABLE
ROWS REMAININGTO BE PROCESSED?
NO
1790
END
YES
1720
READ URL
1730
SEND URL TO SERVER
1740
RECEIVE RESPONSE
1750
SERVER ONLINE?
1760
NO
HANDLE/RECORD ERROR MESSAGE
YES
1770
INITIATE DATA TRANSFER
1780
LOG POLLING TIME

*FIG. 16*

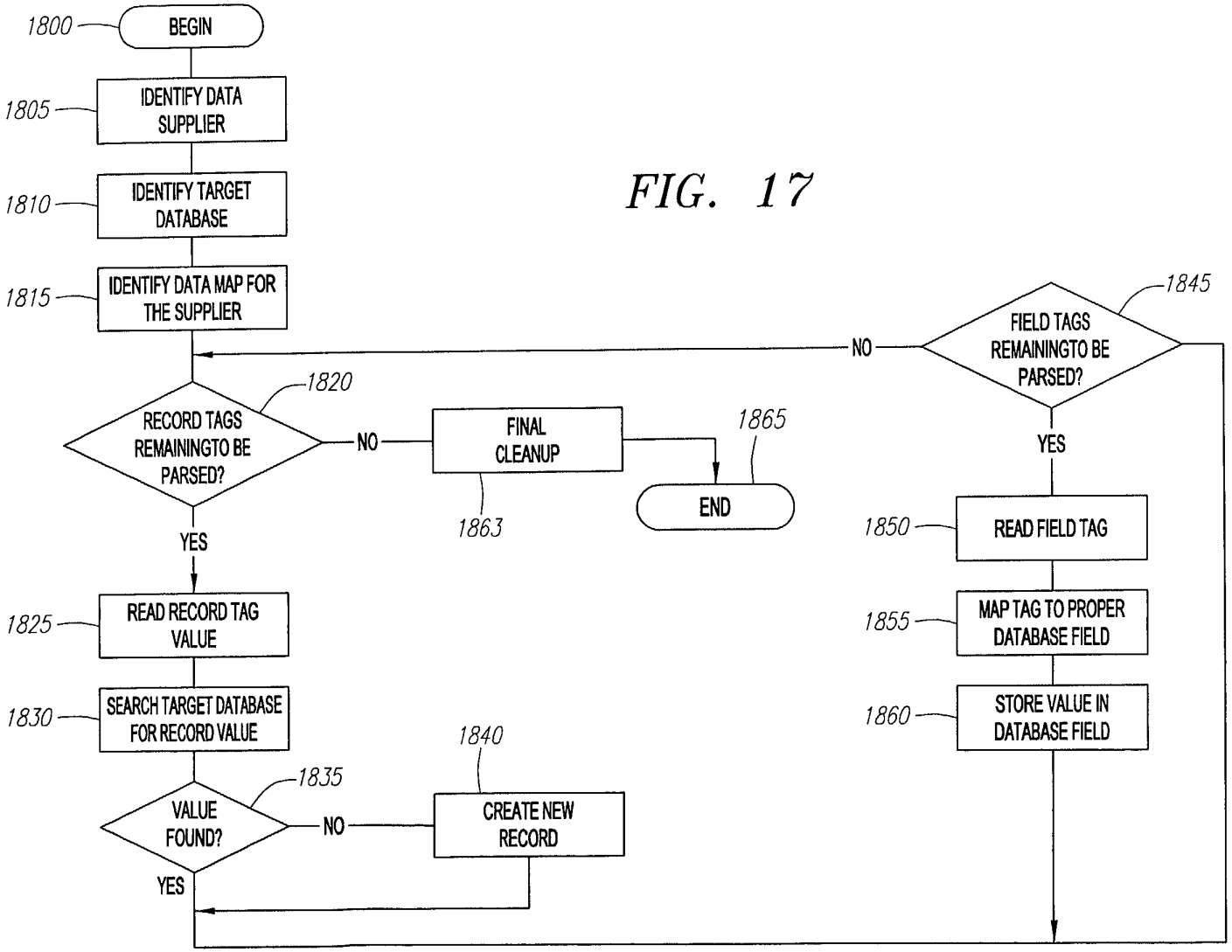
1800
BEGIN
1805
IDENTIFY DATA SUPPLIER
1810
IDENTIFY TARGET DATABASE
1815
IDENTIFY DATA MAP FOR THE SUPPLIER
1820
RECORD TAGS REMAININGTO BE PARSED?
NO
FINAL CLEANUP
1865
END
1863
YES
1825
READ RECORD TAG VALUE
1830
SEARCH TARGET DATABASE FOR RECORD VALUE
1835
VALUE FOUND?
NO
1840
CREATE NEW RECORD
YES
1845
FIELD TAGS REMAININGTO BE PARSED?
NO
YES
1850
READ FIELD TAG
1855
MAP TAG TO PROPER DATABASE FIELD
1860
STORE VALUE IN DATABASE FIELD

*FIG. 17*